

AMENDMENTS TO THE CLAIMS:

***This listing of claims will replace all prior versions, and listings,
of claims in the application:***

Claims 1-27 (Canceled)

28. (Currently amended) ~~A-~~The method as claimed in claim-~~27~~ 46,
~~comprising wherein the step of using the mapping to negotiate the HIP~~
~~connection between the HIP proxy node and the second host comprises:~~

the HIP proxy node looking up the retrieved IP address and the retrieved
HIT from the mapping based on the substitute IP address in the session
initiation message; and

the HIP proxy node performing the HIP negotiation using the retrieved IP
address and the retrieved HIT to locate and identify ~~the~~ a Responder in the HIP
negotiation together with an IP address and HIT of the HIP proxy node to locate
and identify ~~the~~ an Initiator in the HIP negotiation.

29. (Currently amended) ~~A-~~The method as claimed in claim-~~27~~ 46,
wherein the retrieved IP address is ~~the~~ an IP address of a Forwarding Agent
used by the second host, ~~and the method~~ further comprising initiating the HIP
negotiation between the HIP proxy node and the second host by the HIP proxy
node sending ~~the~~ an initial HIP negotiation packet to the Forwarding Agent.

30. (Currently amended) ~~A~~The method as claimed in claim 29, further comprising, following receipt of ~~the~~an actual IP address of the second host at the HIP proxy node during the HIP negotiation, the HIP proxy node including the actual IP address in the mapping maintained at the HIP proxy node.

31. (Currently amended) ~~A~~The method as claimed in claim 30, ~~wherein~~
~~the~~further comprising the HIP proxy node replacing the retrieved IP address ~~is~~
~~replaced~~ in the mapping by the actual IP address following its receipt at the
HIP proxy node.

32. (Currently amended) ~~A~~The method as claimed in claim~~-27~~ 46,
wherein the retrieved IP address is ~~the~~an actual IP address of the second host.

33. (Currently amended) ~~A~~The method as claimed in claim~~-27~~ 46,
further comprising generating the substitute IP address at the HIP proxy node.

34. (Currently amended) ~~A~~The method as claimed in claim~~-27~~ 46,
further comprising, for an outgoing message received at the HIP proxy node
after the HIP connection has been established including as its destination
address the substitute IP address, the HIP proxy node using the mapping to
route the outgoing message over the HIP connection to the second host.

35. (Currently amended) A-The method as claimed in claim 34, wherein the retrieved IP address is ~~the~~ an IP address of a Forwarding Agent used by the second host, ~~and the method~~ further comprising:

the HIP proxy node initiating the HIP negotiation between the HIP proxy node and the second host by sending the ~~initial~~ an HIP negotiation packet to the Forwarding Agent;

following receipt of ~~the~~ an actual IP address of the second host at the HIP proxy node during the HIP negotiation, the HIP proxy node including the actual IP address in the mapping maintained at the HIP proxy node;

the HIP proxy node looking up the actual IP address and the retrieved HIT from the mapping based on the substitute IP address in the outgoing message;

the HIP proxy node routing the outgoing message to the second host using the actual IP address and the retrieved HIT to locate and identify ~~the~~ a destination of the outgoing message; and

the HIP proxy node using an IP address and HIT of the HIP proxy node to locate and identify the source of the outgoing message.

36. (Currently amended) A-The method as claimed in claim-~~27~~ 46, further comprising;

the HIT proxy node completing ~~the an~~ establishment of communications between the first and second hosts by forwarding the session initiation message from the HIP proxy node to the second host over the HIP connection;
the HIT proxy node ~~replying with~~ receiving a session acknowledgment message from the second host ~~to the proxy~~ over the HIP connection; and
the HIT proxy node routing the session acknowledgment message to the first host.

37. (Currently amended) A-The method as claimed in claim 36, wherein the session acknowledgment message is a TCP ACK message.

38. (Currently amended) A-The method as claimed in claim-27 46, wherein the session initiation message is a TCP SYN message.

39. (Currently amended) A-The method as claimed in claim-27 46, further comprising, for an incoming message received at the HIP proxy node from the second host over the established HIP connection, the HIP proxy node using a NAT function ~~of the proxy~~ to route the incoming message to the appropriate destination host.

40. (Currently amended) A-The method as claimed in claim-27 46, wherein the query is a DNS query.

Claim 41 (Canceled)

42. (Currently amended) A ~~The~~ method as claimed in claim ~~41~~ 46, wherein the HIP proxy node retrieves the IP address and HIT associated with the second host from an external DNS server.

43. (Currently amended) A ~~The~~ method as claimed in claim ~~41~~ 46, wherein the HIP proxy node retrieves the IP address and HIT associated with the second host from an internal DNS server.

44. (Currently amended) A ~~The~~ method as claimed in claim ~~41~~ 46, wherein the HIP proxy node intercepts the query from the first host.

Claim 45 (Canceled)

46. (Currently amended) A method for use by a Host Identity Protocol, HIP, proxy node of at least partially securing communications, via the HIP proxy node, between a first host which is not HIP enabled and a second host which is HIP enabled, the method comprising:

the HIP proxy node receiving a query from the first host to resolve ~~the an~~ Internet Protocol, IP, address of the second host;

in response to said query, the HIP proxy node retrieving an IP address and Host Identity Tag, HIT, associated with the second host;

in response to said retrieval, the HIP proxy node returning a substitute IP address associated with the second host, and maintaining a mapping between the substitute IP address, the retrieved IP address and the retrieved HIT; and

upon receipt of a session initiation message from the first host including as its destination address the substitute IP address, the HIP proxy node using the mapping to negotiate a HIP connection between the HIP proxy node and the second host.

47. (Currently amended) A Host Identity Protocol, HIP, proxy node for use in at least partially securing communications, via the HIP proxy node, between a first host which is not HIP enabled and a second host which is HIP enabled, comprising:

means for receiving a query from the first host to resolve the Internet Protocol, IP, address of the second host;

means for retrieving, in response to said query, an IP address and Host Identity Tag, HIT, associated with the second host, for returning, in response to said retrieval, a substitute IP address associated with the second host, and maintaining a mapping between the substitute IP address, the retrieved IP address and the retrieved HIT; and

means for using the mapping, upon receipt of a session initiation message from the first host including as its destination address the substitute IP address, to negotiate a HIP connection between the HIP proxy node and the second host.

48. (Currently amended) A computer-readable medium having stored therein a computer program which, when ~~run-loaded~~ on a HIP proxy node, causes the HIP proxy node to carry out ~~a~~ the method as claimed in claim 46.

49. (Currently amended) A computer-readable medium having stored therein a computer program which, when loaded into a HIP-proxy node, causes the proxy node to become ~~one~~ a HIP proxy node as claimed in claim 47.

Claims 50-55 (Canceled)